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AN APPROXIMATION THEOREM  
FOR CR DISTRIBUTIONS  
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Abstract: In our work we present a modification of the known Baouendi-Treves Approximation Theorem. Instead of working with a general  $N$ -dimensional smooth manifold we will use a quadric manifold  $M$ .

While the original theorem deals with any locally integrable structure  $\mathcal{L}$  of  $CTM$  we will focus on the CR-structure of  $M$  and its solutions: the CR distributions. With this restrictions we achieve convergence in any compact set instead of local approximation.

More precisely: our main theorem states that if  $u \in \text{CR}(M)$  then one can find smooth CR-polynomials  $P_n(w, t)$  such that for every compact subset  $K$  we can approximate  $u$  by  $P_n$  in the distribution sense. In addition to that

- (1) if  $u \in C^k(M)$ ,  $k = 0, 1, \dots$ , then the convergence occurs in the topology of  $C^k(K)$ ;
- (2) if  $u \in h^p(M)$ ,  $0 < p < \infty$ , then the approximation occurs in the topology of  $h^p(K)$ .

If there is enough time, we will present an application.